

INSIGHTS INTO THE DEMOGRAPHIC WINDOW OF OPPORTUNITY AND DEMOGRAPHIC DIVIDEND: A CONCEPTUAL OVERVIEW

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Elena ȘOLDAN,

PhD student,

Department of Demography and Geodemography, Faculty of Sciences, Charles University, Czechia

Scientific researcher, National Institute for Economic Research, Academy of Economic Studies of Moldova

<https://orcid.org/0009-0008-9600-3818>

e-mail: elena.sholdan@gmail.com

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SUMMARY

The demographic dividend presents the conceptual framework through which changes in the population's age structure positively affect economic development. However, the demographic dividend is a complex concept, and, more than two decades after its inception, approaches remain diverse. This paper presents a literature analysis on the demographic dividend to understand the concept of the demographic dividend and its relationship to its interrelated term – the demographic window of opportunity.

The literature analysis was undertaken following an evolutionary approach, including an examination of definitions of the demographic dividend and methodologies for its assessment. Two different approaches to view the demographic dividend, the demographic and the economic, were discussed, as well as the two indicators – the demographic support rate and the economic support rate.

The results of the analysis confirmed the presumption of the demographic dividend and the demographic window of opportunity as being two distinct concepts – mutually interrelated but not substitutable. Also, for the analysis of the demographic dividend, the demographic support ratio indicator is as necessary as the economic support ratio, influencing the policy – making process at the national level in achieving the demographic dividend.

The study underlines the importance of distinguishing between the concept of the window of opportunity that is created by demographic change and the demographic dividend – the positive economic outcome of these changes. Employing the concept of a window of opportunity, directly linked to the demographic dividend, would create the integrative framework needed to identify the pathways of positive demographic influence on economic development.

Keywords: *demographic window of opportunity, demographic dividend, economic development, support ratio, policies*

Dividendul demografic prezintă cadrul conceptual prin care schimbările în structura de vârstă a populației pot avea efecte pozitive asupra dezvoltării economice. Cu toate acestea, dividendul demografic este un concept complex și, după mai bine de două decenii de la crearea sa, abordările în interpretarea acestuia rămân diverse. În această lucrare este prezentată analiza literaturii de specialitate cu privire la dividendul demografic, cu scopul reflecției științifice a conceptului de dividend demografic și a relației acestuia cu termenul său interconecta – fereastra demografică de oportunitate.

Analiza literaturii de specialitate a fost efectuată după o abordare evolutivă, incluzând o examinare a definițiilor conceptului dividendul demografic și a metodologiilor de evaluare a acestuia. Au fost discutate două moduri diferite de abordare a dividendul demografic, cel demografic și cel economic, precum și a doi indicatori principali - rata de suport demografică și rata de suport economică.

Rezultatele analizei au confirmat ipoteza dividendului demografic și a ferestrei de oportunitate demografică ca fiind două concepte distincte – deși interconectate, nu sunt substituibile. De asemenea, pentru analiza dividendului demografic, indicatorul ratei de suport demografică este la fel de necesar ca și rata de suport economică, influențând procesul de elaborare a politicilor la nivel național pentru realizarea dividendului demografic.

Se concluzionează că este important de a distinge între conceptul de fereastra de oportunitate care este creată de schimbările demografice și dividendul demografic – rezultatul economic pozitiv al acestor schimbări. Utilizarea conceptului de fereastră de oportunitate, direct legată de dividendul demografic, ar crea cadrul integrator necesar pentru a identifica pârgurile prin care schimbările demografice influențează pozitiv dezvoltarea economică.

Cuvinte cheie: *fereastră demografică de oportunitate, dividend demografic, dezvoltare economică, rata de suport, politici*

Демографический дивиденд – это концептуальная установка, согласно которой изменения в возрастной структуре населения могут положительно сказаться на экономическом развитии. Концептуально демографический дивиденд является сложным понятием, и несмотря на то, что прошло более двух десятилетий после его появления подходы к его интерпретации, существенно различаются. В данной статье представлен обзор литературы по демографическому дивиденду, чтобы получить дополнительные сведения для понимания концепции демографического дивиденда и его связи с термином "демографическое окно возможностей".

В анализе литературы использовался эволюционный подход, включающий обзор определений концепта "демографический дивиденд" и методологий его оценки. Были рассмотрены два различных подхода к демографическому дивиденду – демографический и экономический, а также проанализированы два показате-

ля его оценки – традиционный коэффициент демографической поддержки и экономический коэффициент поддержки.

Результаты мета-анализа подтверждают предположение о том, что демографический дивиденд и демографическое окно возможностей – две разные концепции, взаимосвязанных, но не взаимозаменяемых. Для анализа демографического дивиденда показатель коэффициента демографической поддержки так же необходим, как и показатель экономической поддержки, что имеет существенное значение для разработки политики на уровне страны с целью использования демографического дивиденда.

Делается вывод о том, что важно разделять "окно возможностей", создаваемое демографическими изменениями, и "демографический дивиденд" – положительный экономический результат этих изменений. Использование термина "окно возможностей", непосредственно связанного с демографическим дивидендом, позволит создать интегративную структуру, необходимую для определения путей достижения позитивного демографического влияния на экономическое развитие.

Ключевые слова: демографическое окно возможностей, демографический дивиденд, экономическое развитие, коэффициент поддержки, политика

INTRODUCTION

The demographic dividend narrative states that population positively influences economic development through beneficial population age composition when the working-age population predominates. Obtaining this economic gain, however, is strongly dependent on how governments can adapt to those demographic changes.

The non-deterministic nature of the demographic dividend has been repeatedly mentioned in the literature on demographic dividend narrative and discussions. At the same time, the achievement of the demographic dividend at the national level is not very much supported by the evidence. In addition, when it comes to the fundamentalistic analysis of how population age structure changes could impact the economy, the theoretical framework of the demographic dividend, becomes challenging, given its different interpretations.

Currently, a wider range of perspectives on the demographic dividend and its link with the demographic window has been noticed by the researchers. Nevertheless, integrative works focussing on the theoretical, methodological, and practical complexity of the demographic dividend

have taken only in past years. The research attempts to join that discussion on the demographic dividend, demographic window, and population-development nexus. An insightful understanding of the demographic dividend will allow a better operationalization of the two terms and integration into developmental theories. Additionally, policy-related dependence on achieving the demographic dividend at the country level will critically depend on a proper understanding of the demographic dividend concept.

This article undertakes a conceptual analysis of the demographic dividend and demographic window of opportunity. Firstly, it was followed the evolution of the demographic dividend concept. Secondly, the demographic dividend definitions and methods have been analyzed. Then, it has been discussed the two indicators of the demographic dividend assessment – the economic and conventional support ratios. Lastly, the analysis of the political framework for demographic dividend achievement is also supportive of understanding the relation between demographic window and demographic dividend concepts.

LITERATURE REVIEW

How population dynamics influence economic growth was explained by Bloom and Williamson (1998). Accordingly, economic growth can be positively determined by population dynamics if the growth rate of the working population is more rapid than that of the dependent population. Taking evidence from the East Asian experience, the positive demographic impact occurs under proper political and institutional settings.

The work became a turning point in discourses on population and development - an actualized debate

on accelerated population growth in late demographic transition countries and structural age transformation in advanced societies. A possible demographic transition in Sub-Saharan Africa would come with a promising result - the decline in fertility could induce an economic bonus - the demographic dividend previously experienced by East Asian tigers.

It was mentioned that the achievement of demographic dividend is realized through a series of reforms and policies that come above those of markets, particularly

from the fields of education, health, institutional and macroeconomic stability. A widely cited work (Cuaresma et al., 2014) argues, for example, that there would be no positive economic results due to demographic changes without improvements in education, and the demographic dividend is, in fact, an educational dividend.

In economic studies, the concept of demographic dividend has found, along with classical models, its applicability in other models of economic growth, such as the theory of Dual Economic Development (Cai, 2010). Within the NTA project, created to study the generational economy and the impact of the change in the population structure, the study of the demographic dividend also found its applicability (UN, 2013).

Aside from its popularity in both scientific and political areas, assumptions of the demographic dividend and its positive economic impact have not always been supported by evidence. According to social researchers, the phenomenon of the increase in the high percentage of young people in society (also called the youth bulge) is associated with an increased level of conflicts in different countries and regions (Furtuna, 2018). Also, based on the age structure variable, Cincotta (2008) predicted, the so-called Arab Spring - a series of revolutions in North Africa and the Middle East.

The research community has completed the non-deterministic nature of the demographic dividend, by mentioning that, a rapid increase, like during the current demographic transitions, of the working-age population would generate significant economic and social imbalances in the form of unemployment, internal conflicts, and population movement (Canning et al., 2015; Pool, 2007).

The term demographic window of opportunity was, from the beginning, intrinsically linked to the term demographic dividend. It was formulated in the context of the fact that demographic dividend is not automatic, but only a window of opportunity and depends on the ability of countries to properly react to the demographic changes (Bloom et al., 2003). Given the importance and increased interest in changing of the age structure composition, and the possible positive economic impact, United Nations (2004) conceptualizes the demographic

window, using fixed age intervals for the period in which the proportion of the working-age population is at its historical maximum.

It can be observed, though, a bold underutilization of the term demographic window of opportunity in the demographic dividend narrative - in political discourses, and also in scientific literature. Also, the demographic dividend and demographic window are often treated as substitutable terms.

Studies that follow on demographic dividends are increasingly recognized, that is not a commonly accepted definition of the demographic dividend. The different field that covers the theoretical framework of the demographic dividend leads to different approaches for the demographic dividend treatment. These different views on demographic dividends have been classified into demographic, economic, and social approaches (Barsukov, 2019).

More than two decades of studies on the demographic dividend, a wide range of methods for assessing the demographic dividend, different way of treating the concept, and its importance in practical application, gave rise to the review studies, aiming to cover the methodological aspects of the demographic dividend (James, 2018; Oosthuizen & Magero, 2021) and the applicability part of the demographic dividend - policy framework (Groth et al., 2019). The importance of such attention has been confirmed earlier by one of the proponents of the demographic dividend, mentioning that, the methods of estimation of the demographic dividend would influence interpretations and as a consequence, policy formulation (Williamson, 2013).

In this study, it is aimed to review the concept of demographic dividend and the demographic window.

The aim of the research is to get insights into the demographic dividend and demographic window concepts and the relation between them.

The main hypothesis is that the demographic dividend and demographic window are not substitutable, but complementary concepts.

Correspondingly, I have addressed four main questions:

1. *How in literature the concept of demographic dividend and demographic window has been developed to date?*
2. *Which are the main definitions offered to the demographic dividend to date, and are the diversity of methods for analysis influencing the definition of the demographic dividend?*
3. *To what extent does the indicator of economic support ratio substitute the conventional support ratio?*
4. *What is the role of the demographic window in policy formulation for demographic dividend achievement?*

DATA SOURCES AND METHODS

The systematic review has been constructed according to the Meta-Analysis (Prisma) Statement, including the inductive element for expanding the literature records. The search strategy of the literature has been focused on the terms of demographic dividend and demographic window.

The sample of articles was selected from Scopus and Web of Science databases and completed from Google Scholar from 1998 to 2023. An additional selection criterion represented the number of citations, as an important mark in disseminating the term of the demographic dividend and demographic window of opportunity.

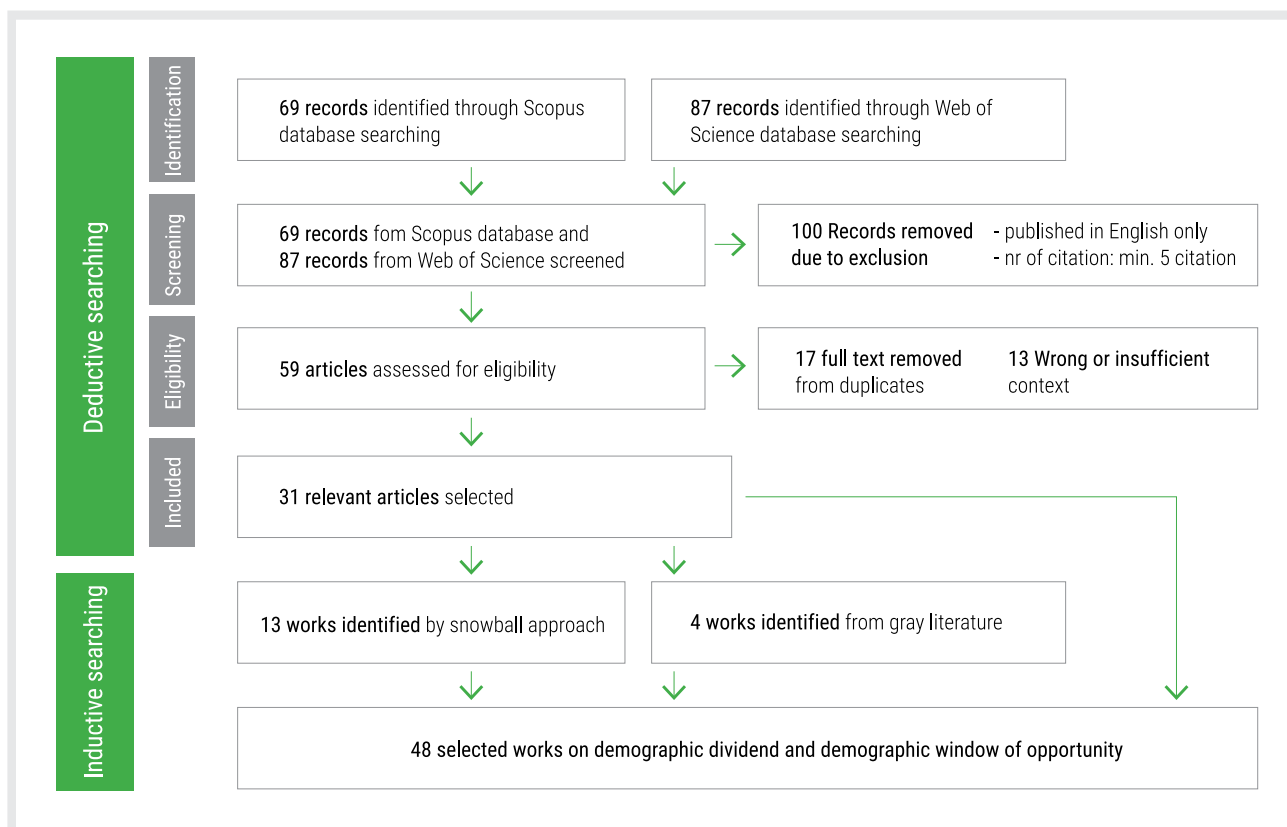
Table 1.

Search strategy for literature identification on topic of demographic dividend and demographic window of opportunity

Database	Concept	Keywords	Results	Results limited, English
Scopus	Demographic dividend	Demographic dividend (Title AND Abstract AND Keywords)	65	61
	Demographic window of opportunity	Demographic window (Title AND Abstract AND Keywords)	4	4
Web of Science	Demographic dividend	Demographic dividend (Title AND Abstract AND Authors Keywords)	71	63
	Demographic Window of opportunity	Demographic window (Title AND Abstract AND Authors keywords)	16	12

Figure 1.

PRISMA flow diagram for literature review on demographic dividend and demographic window of opportunity



RESULTS AND DISCUSSIONS

A. THE DEMOGRAPHIC DIVIDEND AND THE WINDOW OF OPPORTUNITY EXPERIENCED AN EVOLUTIONARY PROCESS

Studying the literature on the demographic dividend, of the concept. I have distinguished four main stages it has been followed, chronologically, the evolution summarised in table 2.

Table 2.

Evolution of the demographic dividend concept (1998-2023)

Period	Characteristic	Operational terms used	Publications
Period of inception (1998-2002)	<ul style="list-style-type: none"> - The analysis of demographic impact on economic development through age structure changes; - Conceptualization of the term: utilization of the term bonus, gain, demographic gift; - Comparison among regions. Evidence from regions experiencing demographic transition. 	Economic growth; Demographic Transition; Rate of population growth; Demographic gain, bonus, gift.	(Bloom & Williamson, 1998; Mason, 2002)
Period of positioning (2003-2009)	<ul style="list-style-type: none"> - Increasing interest in both scientific and applied area; - Formulation of the term demographic dividend as a potential gain; - Applications of age structure to economic forecasting; - Formulation of the demographic window concept methodologically; - Proposed accounting framework NTA using economic support ratio indicator. - Broad coverage of countries and cross-country analysis. 	Economic support ratio; Life cycle production and consumption; Second demographic dividend; Age distribution; Demographic dividend; Demographic window of opportunity; One-time opportunity; Age-structural Transition.	(Bloom et al., 2003, 2007; Bloom & Canning, 2004; Chandrasekhar et al., 2006; James, 2008; Lee & Mason, 2006; Mason, 2005; Mitra & Nagarajan, 2005; Nayab, 2008; Phang, 2007; Pool, 2007; Queiroz & Turra, 2005; United Nations, 2004; Vallin, 2005)
Period of expanded utilization (2010-2017)	<ul style="list-style-type: none"> - Recognition of the complexity of the concept, and its different treatments; - Expanded analysis and its mechanisms, the importance of employment, education and savings; - Depth study case analysis including factors and related indicators; - Discussion on the effect of migration, and internal labour market on the demographic dividend. 	Economic development; Age structure changes; Potential economic gain; Youth bulge, Brain drain; Economic dependency ratio.	(Ahmed et al., 2016; Cai, 2010; Canning et al., 2015; Crespo Cuaresma et al., 2014; Eastwood & Lipton, 2011, 2012; Groth & May, 2017; Islam, 2016; Mason et al., 2016; Omoju & Abraham, 2013; Pace R. & Ham-Chande R. Editors, n.d.; Queiroz & Turra, 2010; Sathar et al., 2013; Ssewamala, 2015; Williamson, 2013; World Bank, 2016; Yip et al., 2010)
Period of reconceptualization (2018-2023)	<ul style="list-style-type: none"> - The distinction of the demographic window of opportunity period from the demographic dividend has gained more ground in literature; - Different definitions of the demographic dividend: potential or actual demographic dividend, depending on the method of assessment applied; - Works aimed to review the concept and methods used for demographic dividend analysis. 	Economic growth; Youth empowerment; Fertility decline, Family Planning Human capital investment Surplus Labor Youth, Demographic disaster Entrepreneurship Economic life cycle	(Barsukov, 2019; Chauhan & Arokiasamy, 2018; Elhadary et al., 2018; Farid & Mostari, 2022; Groth et al., 2019; Islam, 2020; James, 2018; Margaret, 2020; May & Rotenberg, 2020; Oosthuizen & Magero, 2021; Woldegiorgis, 2023; Youssef et al., 2018)

Source: authors' elaboration

In the first stage - ***the period of inception (1998-2002)*** - attention was drawn to the growth rates of the working-age population and the possible impact on economic well-being. This unusual growth of the working-age population with its productive potential, was called a gift, gain, bonus, and only occasionally demographic dividend. Also, in this period, the term demographic window of opportunities also is utilized, mentioned in the context of policy measures needed to achieve the demographic dividend. Right from the wording, the need to draw attention to the non-deterministic nature of the concept and the possibility of confusion in this regard was specified: „The term demographic bonus or dividend is misleading if taken too literally because it suggests that the economic benefits are certain. What the developing countries are actually experiencing is a demographic opportunity” (Mason, 2002:1)

The researchers that followed in ***the period of positioning (2003-2009)***, were the result of an increased interest both from a scientific and practical domain. The term gain, bonus has been replaced by the term demographic dividend. In this period, the window of opportunity is specified as it is a one-time opportunity, referring to limited-time benefits that demographic transformations can induce. The fact that structural transformations can be also the result of population momentum or other factors influencing fluctuations in the age structure of the population in post-transition countries is mostly ignored. Also at this stage, different approaches are proposed to account for the concepts. Researchers recognize, though, that the optimism related to the demographic dividend concept on the one hand, and strong policy dependence on it could create misconceptions: “What needs to be emphasized here is that economic gains from demographic dividend are not certain, as the term might misleadingly imply” (Nayab, 2008).

The period of expended utilization (2010-2017) on demographic dividend includes an analysis of the mechanisms for demographic dividend achievement: savings, education, and employment. After the first decade of using the concept, a temperation of the demographic dividend optimistic discourse can be observed. When reviewing the demographic dividend in 2013, Williamson raised discussions on a whole range of economic aspects that might affect the achievement of

the demographic dividend. The literature is also enriched with studies regarding the estimation of the window of opportunity (United Nations, 2004) and integrative works on demographic dividend and demographic window (Pace & Ham-Chande, 2016).

The period of reconceptualization (2018-2023) became more critical on the view of the demographic dividend, with more frequent asking if there is a demographic dividend or demographic burden in the context of the late transitional countries. The literature in this period includes work aiming to review the demographic dividend and its methodologies for assessment. Attention to distinguishing between demographic dividend and the demographic window gained more interest. In addition, a wide range of methodologies for the assessment of the demographic dividend gave rise to a different way of treating the demographic dividend: a potential or actual demographic dividend.

The accounting approach NTA distinguishes two demographic dividends: the first and the second demographic dividend. When formalized in its conventional view, the demographic dividend, on its own, is the result of two effects through which age structure change has its economic impact: the mechanical effect is the increase in the working-age population with its increase in labor implied. The second effect is behavioral, and it refers to an increase in savings and human capital with its beneficial impact on productivity. It should be mentioned that the separation of the dividend in the first and second dividend concepts lined up with this formalization. The second demographic dividend is mostly associated with the post-transitional period when an aging society induces an economic benefit, but again, with an increase in savings and productivity effect of increased human capital. Also while separating by their way of functioning, the proponents of the second dividend concept mention that both the first and second dividends are nonsequential phenomena.

Overall, following the literature to date, it can be observed that the demographic window of opportunity has been an interrelated concept since the beginning. It evaluates, though, from a metaphorical formulation, “the demographic dividend is merely a demographic window” to the separate methodology of assessment of the demographic window and demographic dividend.

B. DIVERSITY IN DEMOGRAPHIC DIVIDEND DEFINITIONS IS INFLUENCED BY THE APPROACHES AND METHODS OF ANALYSES APPLIED.

During the literature review, it has given attention to the definitions and theoretical explanations of the demographic dividend and how authors are treating the dividend. It revealed two main tendencies: the demographic dividend is treated either as an opportunity for economic growth (the demographic window, in my interpretation) or as the economic outcomes resulting from the demographic changes (the demographic

dividend). Definitions of the demographic dividend from the literature survey have been summarized in the tab. 3. The diversification can be observed not only in the definitions but also in the methods of analysis. Moreover, the definition of demographic dividend will be shaped depending on what is focused on: the demographic component or the economic component of the demographic dividend.

Table 3.*Definitions given to demographic dividend concept by different authors*

Publication	Method	Definition	Remarks
(Phang, 2005:123)	Accounting approach	"The "demographic dividend" refers to the opportunity for economic growth brought about by the increasing proportion of the working-age population during the demographic transition".	The demographic dividend concept is treated as an opportunity for economic growth.
(Nayab, 2008:2)	Descriptive	"The demographic dividend can be defined as the potential economic benefit offered by changes in the age structure of the population, during the demographic transition, when there is an increase in working-age population and an associated decline in the dependent age population".	The dividend is treated as a potential economic benefit during age-structural changes.
(James, 2008:63)	Econometric method, the two-stage least square (2SLS) method.	"The demographic dividend is defined as a rise in the rate of economic growth due to a rising share of working-age people in a population".	In the author's acceptance, economic growth is not a potential, but an actual economic growth.
(Omoju & Abraham, 2013:353)	Descriptive	"The demographic dividend is the socio-economic opportunity that emerges in a country as fertility rates decline which can lead to economic growth and development when supported with appropriate and effective public policies".	Treated demographically (age structure changes) with economic impact.
(Sathar et al., 2013:63, 5)	Multi-state population projection method	"The demographic bonus or demographic dividend refers to the opportunity created over a period of about 40–50 years during which, as a result of reduced proportions of dependent children, the proportion of the population of labor force age increases significantly, resulting in direct and indirect opportunities to increase per capita output".	The demographic dividend presents an opportunity to increase per capita output.
(Crespo Cuaresma et al., 2014:299)	Panel data regression approach	"The beneficial effect of changes in age structure after a decrease in fertility has become known as the "demographic dividend".	Positive effect as a result of demographic factors.
(Canning et al., 2015:1)	Descriptive (book)	"The demographic dividend describes the interplay between changes in a population's age structure due to the demographic transition and rapid economic growth. Having a large number of workers per capita gives a boost to the economy provided there are labor opportunities for the workers".	The used word interlay between age structure and economic growth.
(Groth & May, 2017:1)	Descriptive, book	"The concept of the demographic dividend (DD), i.e., the accelerated economic growth and increasing surplus resulting from an expansion of the working-age population with respect to the young dependent population".	The economic growth is accelerated by the working-age population increase, the surplus represents the demographic dividend.
(James, 2018:2)	Review of methods and approaches	The demographic dividend signifies the process of changing age structure and its possible impact on economic development. Demographic window is defined as the duration in which the working age population is maximum to create better economic opportunities".	The demographic dividend is viewed as a positive economic impact. The demographic window is a period.

Publication	Method	Definition	Remarks
(Chauhan & Arokiasamy, 2018:2)	Accounting approach	"The term demographic dividend is understood as the eventual rise in the economic growth due to a rising share of working-age people in the population. Demographic dividend occurs as a result of an increase in the workforce which if employed productively can give rise to a demographic dividend".	The eventual rise in economic growth as result of the increase in working-age population.
(Barsukov, 2019:171)	Cluster approach	"Demographic dividend is a potential of economic growth which could be caused by the change of population's age structure".	The demographic dividend is treated as being a potential economic output, resulting from demographic factors.
(Margaret, 2020:7)	Theoretic approach	"The demographic dividend is a temporary opportunity for faster economic growth that begins when fertility rates fall, leading to a larger proportion of working-age adults and fewer young dependents".	The demographic dividend is treated as an opportunity for accelerated economic growth.
(Islam, 2020:1)	Accounting approach	"The economic and social benefits derived from the demographic changes are termed by demographers as demographic "dividend" or "bonus" or "window of opportunity".	Demographic dividend: both economic and social benefits derived from demographic changes.

Source: authors' elaboration

When treated from a demographic point of view, the dividend is the beneficial period, i. e. the demographic window of opportunity. On the other hand, treating from an economic standpoint, the dividend is the economic outcome.

The productive potential of the working-age population is the main argument for positive economic outcomes in this period. By analyzing the concept, it should be considered that a window of opportunity is related to the increase of the working-age population while the

demographic dividend is the consequence, one of the positive scenarios of this evolution.

The demographic window represents a demographic concept that characterizes a specific period of population age structure. It does not replace, though the demographic dividend term, which denotes a hypothetical or actual positive economic outcome in the period of demographic changes. While the demographic window is a term related to population changes, the demographic dividend is one of the economic essences, resulting from measures implementation at the state level.

C. ASSESSMENT OF THE DEMOGRAPHIC WINDOW EXCLUSIVELY THROUGH THE ECONOMIC SUPPORT RATIO MAY DISTORT THE IDENTIFICATION OF THE DEMOGRAPHIC PERIOD BENEFICIAL FOR ECONOMIC DEVELOPMENT

The literature survey revealed that the different treatments of demographic dividend concepts have a profound methodological base. We have seen previously, that demographic dividend and demographic window, have had a tendency to be treated conceptually and theoretically as substitutable terms.

Also, when it comes to indicators for the demographic dividend assessment, researchers see the economic support ratio as being more preferable to the conventional support ratio. The explanation that comes is that the fixed age interval to ascertain the working-age population may not capture the employment state, as people may work after pension age, while most of the

young population can be involved significantly later in the labor that at the age of 15 or 20.

The demographic window of opportunity was defined by the United Nations (2004) as the period when the proportion of the population under the age of 15 falls below 30 percent, while the proportion of people age 65 and older is still under 15 percent. The indicator proposed is the dependency ratio which measures the ratio of dependents to the working-age population. The converse of the dependency ratio is the support ratio. The increase in the demographic support ratio can be also used to indicate the moment of opening the demographic window of opportunity.

The economic support ratio, on the other hand, is utilized to estimate the demographic dividend through the accounting method extensively utilized within the NTA approach project. Under this approach, the demographic dividend represents the positive growth rate of the economic support ratio. The period of demographic dividend is when the number of producers is growing faster than the number of consumers. The composite indicator economic support ratio incorporates not only the demographic but also the employment and productivity components along with the consumption profile of the population.

To estimate the demographic dividend through the accounting method, the demographic support ratio also can be used. Nevertheless, the ratio of those who produce to non-producers will be distorted by the reason previously mentioned. In this way, the economic support ratio is instrumental for the estimation the demographic dividend under the accounting approach. The analysis of the demographic dividend for certain countries could be strongly restricted by the available data. The indicators support ratio and more recently, the economic support ratio remains the basic instruments given the accessibility that indicators may offer. However, quantifying the demographic dividend is just as important as creating well-informed guidelines for achieving the demographic dividend. The estimation

of the demographic window through demographic indicators is crucial in assessing this beneficial period, when necessary measures have to be undertaken in order to achieve the demographic dividend, or at least, to react to the demographic changes.

Undoubtedly, the demographic dividend concept includes in its essence both the economic and demographic components and intuitively, the economic support ratio simplifies and summarizes the story of the age population composition impacting economic growth. Those simplifications, though, are not too helpful when charting the ways to achieve a positive outcome – the demographic dividend. In contrast to demographic prospects, economic growth and development is a less predictable scenario and the development of markets is influenced by a multitude of forces.

Understanding when a country goes into the demographic window of opportunity stage represents the starting point in the formulation of the necessary measures to capture the demographic dividend. The demographic dividend has a profound economic nature, but its realization involves a series of measures that go beyond macroeconomics. The value of the demographic concept remains in its developmental dimension, and the exclusive use of the economic support rate might be insufficient for such a complex task.

D. THE FORMULATION OF POLICY MEASURES FOR ACHIEVING THE DEMOGRAPHIC DIVIDEND IS INFLUENCED BY ASSESSING THE DEMOGRAPHIC WINDOW PERIOD.

Along with the evolution of the demographic dividend interpretation and measurement, we also have an overview of the political framework for a demographic dividend. We have observed that the support ratio indicators discussed previously, support our hypothesis of the demographic dividend and demographic window as two separate concepts. In addition, our literature overview on the political framework is also instrumental.

Firstly, researchers underlined that the separation of the demographic indicator is important because obtaining relevant information about the actual and forecast states of the demographic system is one of the key tasks of strategic planning for sustainable development (Barsukov, 2019)

The necessity to differentiate the demographic and economic components of the demographic dividend narrative has been also underlined more recently, interlinking its methodological and practical dimensions in the purpose of obtaining the demographic dividend. In his paper review, (James, 2018) concluded that two important aspects of measuring the demographic dividend are important to be discussed. First of all, the problem of time for different countries and regions: When does the window of opportunity open, and how long does it last?

The second line of questioning is, how do we establish the causality between the age structure of the population and economic growth? This kind of study aims to discuss to what extent, these methodologies can answer important questions related to measures for achieving the demographic dividend. In other way formulated, to what extent the key methodologies that estimate the demographic dividend are able to respond to the types of issues facing policymakers in late transitional countries in their efforts to obtain benefits from demographic changes (Oosthuizen & Magero, 2021).

More recent literature specified that the realization of the demographic dividend story is not so facile to undertake - institutionally, politically, and economically. It thus becomes crucial, to analyze the demographic dividends at the country level in a detailed multidisciplinary and multisectoral manner: "Governments across the region continue to grapple with the policy decisions focused at supporting the realization of the demographic dividend, including in the areas of education, health, and the labour market. At the same time, countries are exposed on an ongoing basis to a variety of shocks, which have the potential to complicate or partially derail these efforts, requiring societies and policymakers to adapt to changing circumstances. Importantly, increased

emphasis on the need for policy interventions to actively include all citizens within growth processes — notions such as inclusive or shared growth—and recognition of the wide range of experiences, conditions and contexts within society mean that reliance on average or aggregate measures is insufficient for effective policymaking.” (Oosthuizen & Magero, 2021:7)

A step forward in dividend policy studies was made by Groth, May and Turbat (2019) who classify policy obtaining the demographic dividend into necessary policies and sufficient policies. All these policies are designed to improve indicators such as dependency ratio, employment dependency ratio, and socioeconomic dependency ratio. The improvement of each of these indicators requires the implementation of its specific policies. For example, improvement of the dependency ratio for achievement of the demographic dividend refers to the policies related to the population, necessary to open the window of opportunity, to support smaller families.

The employment dependency ratio, similar to the economic support ratio implies the improvement of

the labour market and ensuring the absorption of the surplus of the population of working age. The improvement of the socioeconomic dependency ratio, requires improvement in human capital, ensuring the necessary level of consumption and strengthening the agency of those in poverty. Barrientos and Hulme (2009) for example, acknowledge the growing consensus around the view that social protection is an essential component of economic and social development strategies.

In addition, it was mentioned the whole range of mechanisms through which population age structure may influence economic development, of which the most important are labor participation, savings, and human capital. Work focused on interconnections has much of its contribution to demographic dividend theory. Thus, thinking about the policy framework to obtain the demographic dividend in the frame of the mechanisms for the dividend functioning is another way to provide a functional framework. In this sense, a multitude of other indicators, from diverse domains will be needed.

CONCLUSIONS

In this article, we reviewed the conceptual framework of the demographic window of opportunity and of demographic dividend. The main purpose of the article is to get an insight into the demographic dividend and demographic window concepts and the relation between them.

The main finding is that the demographic dividend and demographic window of opportunity are not substitutable but complementary concepts; while the window of opportunity refers to the demographic changes, the demographic dividend represents the positive economic result of these changes. This conclusion relies upon four main results on the literature survey.

Firstly, following chronologically the literature to date, it was found that the demographic window and the demographic dividend have experienced an evolutionary process. It evolves from the metaphorical formulation “the demographic dividend is not merely a demographic window” to separated approaches for its measurement and assessment.

Secondly, a review of the definition of demographic dividend revealed the different approaches for demographic dividend treatment and measurement, in particular the demographic and economic approach. Those different approaches to view of the demographic dividend, though, may create confusion. In essence, when treated from a demographic standpoint, the demographic dividend represents the beneficial period - the demographic window. By contrast, when viewed

from an economic perspective, the demographic dividend is the economic outcome, the positive economic result of the demographic beneficial period. We conclude that a demographic window represents a demographic concept that characterizes a specific period of population age structure. By contrast, the demographic dividend is a hypothetical or actual positive economic outcome in the period of demographic changes. These separations are important and substitution of terms complicates understanding of the conceptual framework of the demographic dividend.

The expanded accounting approach gave priority to the summary indicator of the economic support ratio, ignoring the demographic aspect of the demographic dividend narrative - the population age structure changes. Nevertheless, the assessment of the beneficial demographic period is as important as accounting for the potential demographic dividend - it provides the necessary base for decisions and measures formulation to achieve the demographic dividend. As such, the third result is that the economic support ratio is as important as the demographic support ratio in the analysis of the demographic dividend.

The fourth finding is that the accurate formulation of policy measures for achieving the demographic dividend is influenced by assessing the demographic window period. Identification of the demographic beneficial period, utilization of the demographic indicators and demographic window concept are necessary to create macroeconomic management tools

for the achievement of the demographic dividend. Distinguishing from demographic window to demographic dividend concept is important for a more accurate policy formulation to channel the creative, innovative, and productive potential of a population with beneficial age composition.

This paper attempts to understand the demographic dividend, the demographic window and the relation between them. A clear comprehension of the demographic dividend concept is necessary for better operationalization of the two terms, orienting policy implementation as the demographic dividend achievement would be more possible.

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